YAMADA PUMP TALK

Year 2010 *Number 1*

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Cut-away pump

The cut-away is an open pump, which enables the customer to have a look inside it. The cut away pump is a very strong sales tool. It can be used to show your customer the working principle and the simplicity of the design of our pump in real-life.

You can also use this pump for exhibitions, in your showroom or for other purposes.

We can offer you this pump to you for only €275,00! Place your orders now and convince your customer!

NDP-20BAS CUT AWAY

New employees

Yamada Europe is happy to announce its two new employees to you:

* **Roman Suda** lives in Vienna, is married and has one son. He will be our Regional Sales Manager, working from Austria in the region surrounding Austria: Czech Republic, Slovakia, Hungary, Romenia, Moldavia, Slovenia, Croatia, Bosnia Herzegovina, Serbia, Montenegro, Albania, Macedonia, Bulgaria & Greece.

Mr Suda has 10 years of experience in business development in Eastern Europe, and several years in the air operated double diaphragm pump business. His mission is to increase the market share in Eastern Europe, and make Yamada a well-known and successful through competent and strong business partners. You can reach Mr Suda at r.suda@yamada.nl or 0043-664 431 64 03.

* **Francesca Wiegman** is 30 years old, has a boyfriend and two sons. Francesca will support Mr. Suda in his activities in Eastern Europe. You can reach her from Monday to Thursday from 09:00-13:00 at f.wiegman@yamada.nl or 0031-74 850 99 23.

Training date 2010

In week 20, from ***18-20 May 2010*** we will organize a new training at our office in Hengelo. This training will have a new and improved program and will be a combination of technical and sales courses. Through this training you will be able to update your knowledge and skills in several fields, and it is a good opportunity to meet each other in person.

If you want to attend this training, please send an email to Leonie Hueck (l.hueck@yamada.nl)

As usual the costs for your stay in the hotel will be for the account of Yamada. Also dinners, lunches and transfer to the Yamada Europe office are included.

Travel expenses and other costs will be for your own account.

Air Volume Vs Energy Consumption

The Cost of powering a Pump. Many people using Air Powered Pumps believe that the greater the Air Volume used the more energy consumed. However this is not actually the case. When talking about energy, we actually pay for the work done, not the air consumed. In a hydraulic system, **the Work Done** to move Fluid is equal to **Volume** multiplied by **Pressure.** (Volume x Pressure = Work).

The Hydraulic Electric Analogy. The following formula illustrates the relationship between Pressure, Volume and Work when expressed electrically. Volts x Amps = Watts

- **115V x 6.5A = 747.5W**
- **230V x 3.25A = 747.5W**

Notice that in both these systems, even though the Amperage (Volume) varies, because the Voltage (Pressure) also varies, Watts (Work done) actually remains the same. In this case, when we pay the electric bill, we pay for Watts. A Pneumatic Circuit uses the same principle as an Electric Circuit; Air Pressure x Air Volume = Energy. In this case energy is expressed as “Horsepower" and is the required output from an Air Compressor.

Next; to achieve a specific flow rate at a specific head, a pump will require a specific amount of Air Pressure and a specific amount of Air Volume to the job. Different Makes, models and sizes of pump will operate at different air pressures and require different amounts of air volume to achieve the same result. Compare any 2 pump curves to understand this point.

For example, A Yamada NDP-50 Series pump using a Rubber Diaphragm delivering 379 l/m at 15 m of Total Dynamic Head, will require 119 m^3/h Air Volume and 3,45 Bar Air Pressure. Comparing an equivalent sized, brand X pump under the same conditions, we see it requires 102 m^3/h Air Volume and 4,48 Bar Air Pressure.

When looking only at air volume, the brand X pump uses 17 m^3/h less than the Yamada pump, a 15% saving. However when looking at required Air Pressure, the Yamada Pump scores higher requiring 1.03 Bar less Pressure. By calculating the work done and using the Compressor Horse Power Calculator, we see that brand X pump requires 9.66 HP while the Yamada only requires 9.52 HP. In this particular case, although the Yamada Pump requires more air volume, it requires less air pressure to reach the same point and is in fact more efficient and cheaper to run.

Just because a pump uses less air volume does not mean it is more efficient and the same concept is true when working with any kind of Air Powered Equipment.

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